

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P559001

Luminaire Tested: FSR-12-1-LD4-1STD-50-UNV-82-88-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559001  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/20/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: FAIL-SAFE  
Catalog Number: FSR-12-1-LD4-1STD-50-UNV-82-88-EDD  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

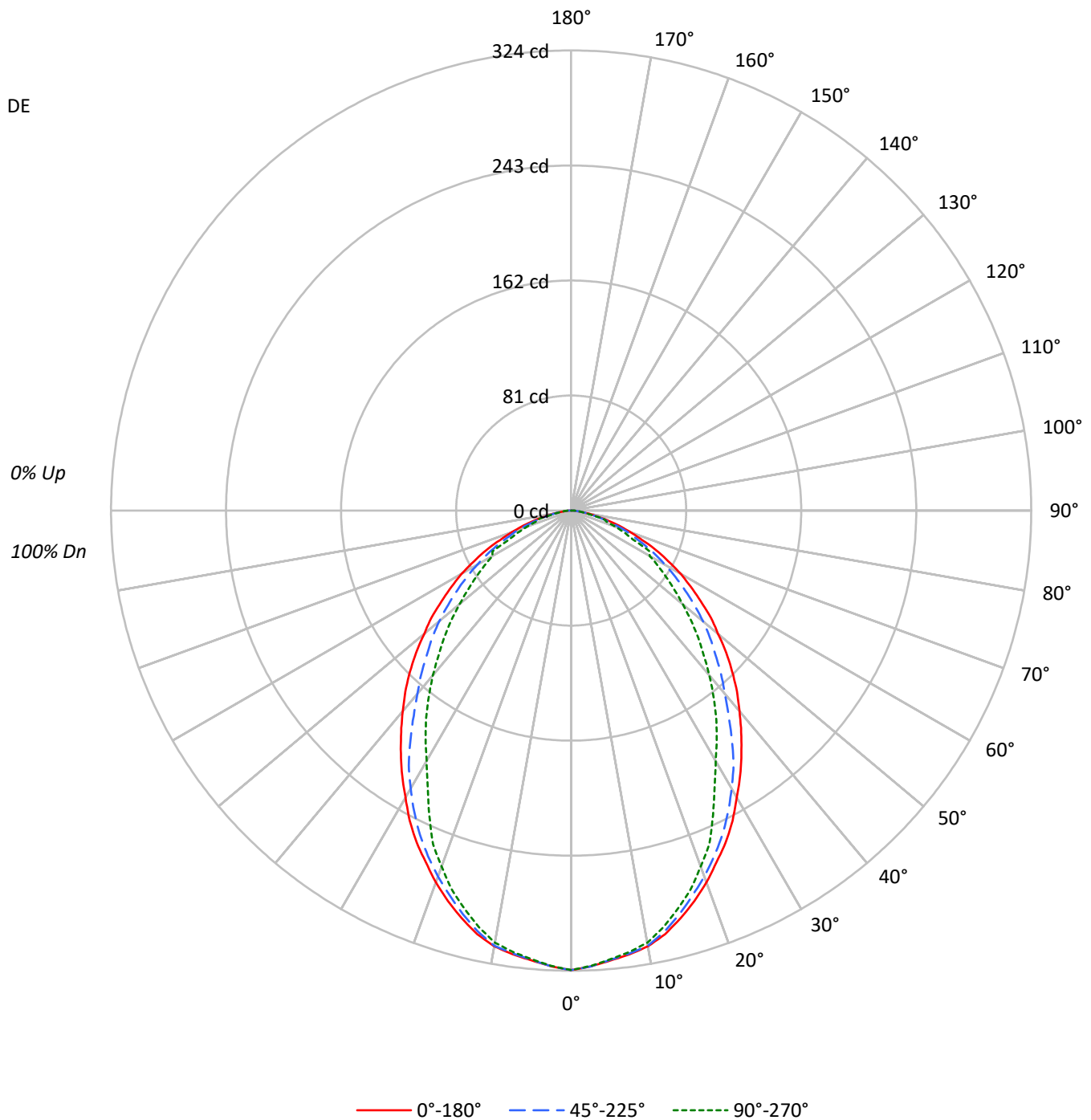
Lumens per Lamp: N/A  
Luminaire Lumens: 635.0 lumens  
Efficiency: N/A  
Efficacy: 76.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



TEST NUMBER: P559001

CATALOG NUMBER: FSR-12-1-LD4-1STD-50-UNV-82-88-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P559001

CATALOG NUMBER: FSR-12-1-LD4-1STD-50-UNV-82-88-EDD

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									20									
RC	80									70									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																												
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																												
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																												
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																												
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																												
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																												
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																												
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																												
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																												
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																												
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																												

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3482	3482	3482
5°	3435	3431	3426
10°	3405	3400	3376
15°	3313	3280	3234
20°	3191	3140	3054
25°	3059	2993	2806
30°	2900	2808	2528
35°	2746	2594	2339
40°	2591	2365	2127
45°	2442	2186	1924
50°	2261	2030	1716
55°	2091	1839	1537
60°	1916	1643	1376
65°	1686	1439	1220
70°	1388	1259	1035
75°	1102	965	1011
80°	744	694	651
85°	457	556	642

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2442 cd/sqm



TEST NUMBER: P559001

CATALOG NUMBER: FSR-12-1-LD4-1STD-50-UNV-82-88-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	30.1	4.7
10°-20°	82.6	13.0
20°-30°	114.4	18.0
30°-40°	122.0	19.2
40°-50°	111.3	17.5
50°-60°	87.2	13.7
60°-70°	56.8	8.9
70°-80°	25.2	4.0
80°-90°	5.4	0.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	227.1	35.8
0°-40°	349.1	55.0
0°-60°	547.6	86.2
0°-90°	635.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	635.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	324	324	324	324	324	
5°	318	318	318	317	317	30
15°	297	297	294	291	290	84
25°	258	256	252	243	236	118
35°	209	208	197	182	178	131
45°	160	157	144	132	126	124
55°	111	108	98	86	82	100
65°	66	62	56	58	48	65
75°	26	25	23	22	24	28
85°	4	4	4	5	5	5
90°	0	0	0	0	0	



TEST NUMBER: P559001

CATALOG NUMBER: FSR-12-1-LD4-1STD-50-UNV-82-88-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	323.5	323.5	323.5	323.5	323.5
2.5°	321.2	321.2	321.2	320.8	320.8
5°	317.9	317.5	317.5	317.1	317.1
7.5°	315.2	314.9	314.5	314.1	313.4
10°	311.5	311.5	311.1	309.3	308.9
12.5°	305.5	305.1	303.6	301.0	300.3
15°	297.3	297.3	294.3	291.3	290.2
17.5°	288.3	287.9	284.2	281.2	279.7
20°	278.6	277.8	274.1	269.2	266.6
22.5°	267.7	267.7	263.3	256.9	254.3
25°	257.6	256.2	252.0	243.1	236.3
27.5°	246.1	243.8	239.3	226.6	218.8
30°	233.3	232.2	225.9	209.4	203.4
32.5°	221.4	219.5	212.8	195.6	190.7
35°	209.0	207.5	197.4	182.5	178.0
37.5°	196.7	194.8	182.1	170.1	164.5
40°	184.4	182.1	168.3	157.4	151.4
42.5°	172.8	169.8	156.3	144.7	138.0
45°	160.4	157.1	143.6	131.6	126.4
47.5°	148.1	145.1	132.7	120.4	114.4
50°	135.0	132.4	121.2	108.8	102.5
52.5°	124.1	120.0	109.2	96.9	91.6
55°	111.4	108.1	98.0	86.4	81.9
57.5°	99.8	96.5	87.1	76.3	72.5
60°	89.0	84.1	76.3	66.9	63.9
62.5°	77.0	73.3	66.6	58.7	62.4
65°	66.2	62.4	56.5	57.6	47.9
67.5°	54.2	52.4	47.1	41.9	40.4
70°	44.1	41.9	40.0	34.4	32.9
72.5°	35.2	32.9	30.3	27.3	26.2
75°	26.5	24.7	23.2	22.1	24.3
77.5°	18.3	17.6	16.5	15.3	15.0
80°	12.0	11.6	11.2	10.8	10.5
82.5°	7.1	7.1	7.1	7.1	7.1
85°	3.7	4.1	4.5	4.9	5.2
87.5°	2.2	2.2	2.6	3.0	3.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)